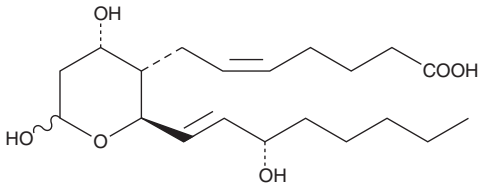
PRODUCT INFORMATION

Thromboxane B_2 MaxSpec® Standard

Item No. 10007237



CAS Registry No.: 54397-85-2
Formal Name: 9α,11,15S-trihydroxythromba-5Z,13E-dien-1-oic acid
Synonym: TXB_2
MF: $C_{20}H_{34}O_6$
FW: 370.5
Purity: ≥95%
Supplied as: A solution in methyl acetate; in a deactivated glass ampule
Concentration: 100 µg/ml (nominal); see certificate of analysis for verified concentration
Storage: -20°C
Stability: ≥3 years; *Stability testing is ongoing to ensure concentration accuracy. The certificate of analysis and product expiry date will be updated upon completion of testing.*
Special Conditions: Store upright and unopened at -20°C. Warm to room temperature prior to opening. Light sensitive.

Description

Thromboxane B_2 (TXB_2) is a non-enzymatically derived, stable, inactive metabolite of TXA_2, which is highly unstable.[1-3] Serum levels of TXB_2 positively correlate with platelet COX-1 activation.[4,5] Urinary levels of TXB_2 reflect intrarenal TXA_2 synthesis, while its metabolites, 11-dehydro TXB_2 (Item No. 19500) and 2,3-dinor TXB_2 (Item No. 19510), reflect systemic TXA_2 secretion.[2,6,7]

TXB_2 MaxSpec® standard is a quantitative grade standard of TXB_2 (Item No. 19030) that has been prepared specifically for mass spectrometry or any application where quantitative reproducibility is required. The solution has been prepared gravimetrically and is supplied in a deactivated glass ampule sealed under argon. The concentration was verified by comparison to an independently prepared calibration standard. This TXB_2 MaxSpec® standard is guaranteed to meet identity, purity, stability, and concentration specifications and is provided with a batch-specific certificate of analysis. Ongoing stability testing is performed to ensure the concentration remains accurate throughout the shelf life of the product. ***Note:*** *The amount of solution added to the vial is in excess of the listed amount. Therefore, it is necessary to accurately measure volumes for preparation of calibration standards. Follow recommended storage and handling conditions to maintain product quality.*

References

1. Needleman, P., Moncada, S., Bunting, S., *et al.* Identification of an enzyme in platelet microsomes which generates thromboxane A_2 from prostaglandin endoperoxides. *Nature* **261(5561)**, 558-560 (1976).
2. Patrono, C., Ciabattoni, G., Pugliese, F., *et al.* Estimated rate of thromboxane secretion into the circulation of normal humans. *J. Clin. Invest.* **77(2)**, 590-594 (1986).
3. Uyama, O., Matsumoto, M., Fujisawa, A., *et al.* Plasma concentrations of thromboxane B_2 in patients with hypertension or cerebrovascular disease. *Prostaglandins Med.* **7(3)**, 199-207 (1981).
4. Arantes, F.B.B., Menezes, F.R., Franci, A., *et al.* Influence of direct thrombin inhibitor and low molecular weight heparin on platelet function in patients with coronary artery disease: A prospective interventional trial. *Adv. Ther.* **37(1)**, 420-430 (2020).
5. Ferroni, P., Riondino, S., Vazzana, N., *et al.* Biomarkers of platelet activation in acute coronary syndromes. *Thromb. Haemost.* **108(6)**, 1109-1123 (2012).
6. Lawson, J.A., Patrono, C., Ciabattoni, G., *et al.* Long-lived enzymatic metabolites of thromboxane B_2 in the human circulation. *Anal. Biochem.* **155(1)**, 198-205 (1986).
7. Patrono, C., Ciabattoni, G., Patrignani, P., *et al.* Evidence for a renal origin of urinary thromboxane B_2 in health and disease. *Adv. Prostaglandin Thromboxane Leukot. Res.* **11**, 493-498 (1983).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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